

REMARKS

The claims are 9-21, with claims 9 and 11 being independent. Claims 1-8 have been cancelled without prejudice or disclaimer. Support for claims 9-21 may be found throughout the specification and in claims 1-8. Further support for claim 9 may be found on page 3, lines 18-41 of the specification. Support for claim 10 may be found on page 3, lines 41-42. Support for claims 9 and 11-21 involving the term "hydrate" may be found on page 4, lines 15-18.

Applicants also submit herewith amendments (by strikeout and underlining) to the originally filed specification. Applicants submit that the amendments to the specification do not add new matter.

A few obvious naming errors have been corrected in the amendments to the specification. The term "-methyl-" has been added to the name of the chloro-ethyl-amino starting material recited in Descriptions 1 and 10: *bis*-(2-chloroethyl)-amine hydrochloride has been changed to -- *bis*-(2-chloroethyl)-methyl-amine hydrochloride--. Applicants respectfully submit that one of ordinary skill in the art would understand, based on the general and specific synthetic methods described in the subject specification, the name of the product compounds (3-bromo-8-(4-*methyl*-piperazin-1-yl)-quinoline (D1) and 8-(4-*methyl*-piperazin-1-yl)-3-phenylsulfonylquinoline hydrochloride (D10)) and the reported NMR data, that the product compounds of D1 and D10 are N-methylated and that the chloroethylamino starting material used to make those compounds should contain an N-methyl group.

Additionally, the term "-(4-fluoro)" has been removed from the name of the product recited in Example 8 (at page 25, line 1): 8-(4-(2,2,2-Trifluoroethyl)-piperazin-1-yl)-3-(4-fluoro)-phenylsulfonylquinoline has been changed to -- 8-(4-(2,2,2-Trifluoroethyl)-piperazin-1-yl)-3-phenylsulfonylquinoline --. Applicants respectfully submit that one of ordinary skill in the art would understand, based on the structure drawn (at page 25, line 2) and experimental procedure provided (at page 25, lines 3-10) for this compound, that the 3-phenylsulfonyl moiety of the product compound of E8 should not contain a 4-fluoro substituent. Claim 11 recites the amended compound name.

Finally, the term -C₂₋₄ alkoxy-C₁₋₄ alkyl (at page 1, line 17 and page 3, line 23) has been amended to read -C₂₋₄ alkyl-oxy-C₁₋₄ alkyl to clarify that the point of attachment to the piperazine nitrogen is through the terminal carbon of the C₂₋₄ alkyl moiety of this group.

Applicants respectfully submit that one of ordinary skill in the art would understand, based on the exemplary phrase "e.g. methoxyethyl" (at page 3, line 23) and Example 7, that the substituent is attached to the piperazine nitrogen *via* the C₂ ethyl moiety. Claim 9 recites this amended term.

Applicants respectfully submit that correction of the obvious errors noted above, by re-naming these materials, (all occurrences) does not constitute new matter. (M.P.E.P. 2163.07(a) and *In re Oda*, 170 U.S.P.Q. 268 (CCPA 1971)).

Descriptions 6, 10 and 11 in the specification have been amended in accordance with amendments made in co-pending U.S. Patent Appln. No. 10/509,078. For example, the solvent used in Description 10 (at page 20, lines 24-42) has been changed to --*n*-butanol--; support for this amendment may be found in the specification at page 7, lines 26-27 (and page 6, lines 18-24).

Description 6 (process for diazotization/iodination) has been amended in accordance with the general methods description provided at page 9, lines 20-32 to recite the organic reagents used in the diazotization/iodination reaction sequence described in original Description 6. An alternative diazotization/iodination procedure to prepare D6 was provided in the originally filed specification.

Description 11, Alternative Procedure (process for removing a Boc group and crystallization of an HCl salt), has been amended to cancel the reactant weights/volumes. The procedure in the original specification for Description 11, Alternative Procedure, appears to be a generalized procedure, based on a series of smaller batch experiments.

Applicants respectfully submit that because the above-noted Descriptions involve the conventional use of conventional reagents and/or routine experimental techniques to accomplish conventional transformations and/or purifications, one of ordinary skill in the art would be able to prepare the compounds of this invention without undue experimentation.

Applicants submit herewith a new Abstract that provides the generic structure of the compounds of formula (I).

The Examiner has advised that Applicants' IDS filed on March 10, 2006 cannot be fully considered as none of the references were seen in the electronic file. Applicants hereby resubmit the IDS, along with the references, with this response.

Claims 1, 3 and 8 were rejected under 35 U.S.C. 112, first and/or second paragraphs. Applicants traverse these rejections. Cancellation of claims 1-8 renders these

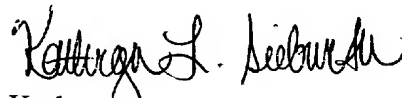
rejections moot, however, Applicants will address the rejections to the extent that they may apply to the pending claims.

The Examiner indicated that previously pending claim 8 was enabled for treatment of anxiety, depression, schizophrenia, and mild cognitive impairment, but not, allegedly, for the other cited diseases/disorders (e.g. obesity). Support for the treatment of obesity (claims 18 and 19) using 5-HT₆ receptor antagonists may be found in Woolley et al. *Neuropharmacology*, Vol. 41: pg 210 (2001) and WO 03/035061 A1.

The Examiner has questioned the use of 5-HT₆ antagonists for the treatment of Alzheimers disease and other cognitive memory disorders. Support for the treatment of Alzheimers disease (claims 20 and 21) and cognitive memory disorders (claims 14 and 15) using 5-HT₆ receptor antagonists may be found in the documents listed in the IDS submitted herewith. Included in these documents is an abstract reporting pre-clinical data for a 5-HT₆ receptor antagonist compound, two citations from ClinicalTrials.org describing clinical studies using a 5-HT₆ receptor antagonist compound in Alzheimers disease and a December 2007 LSE announcement that includes a discussion of the outcome of these two clinical trials.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the subject application is in condition for allowance. If the Examiner has any remaining objections or concerns, the Examiner is respectfully requested to contact Applicants' undersigned attorney to resolve such issues and advance the case to issue.

Respectfully submitted,



Kathryn D. Sieburth
Attorney for Applicants
Registration No. 40,072

GLAXOSMITHKLINE
Corporate Intellectual Property - UW2220
P.O. Box 1539
King of Prussia, PA 19406-0939
Phone (610) 270-5012
Facsimile (610) 270-5090
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